

IN THE CLAIMS:

Please amend the claims as shown in the following listing of claims, which replaces all prior versions and listings of claims in the present application:

1. (Currently amended) A substrate processing chamber component capable of being exposed to a plasma in a process chamber, the component comprising:
 - (a) a substrate processing chamber component structure comprising a composed of metal; and
 - (b) an electroplated coating on the substrate processing chamber component structure, the electroplated coating comprising an interface having a thickness with a gradually changing concentration of yttrium-containing species therethrough.
2. (Original) A component according to claim 1 wherein the yttrium-containing species comprises one or more of elemental yttrium and yttrium oxide.
3. (Original) A component according to claim 1 wherein the yttrium-containing species comprises yttrium oxide, and wherein the electroplated coating further comprises aluminum oxide or zirconium oxide.
4. (Previously presented) A component according to claim 3 wherein the electroplated coating comprises a compound comprising yttrium oxide and aluminum oxide.
5. (Original) A component according to claim 3 wherein the electroplated coating comprises partially stabilized zirconium oxide.

6. (Previously presented) A component according to claim 1 wherein the electroplated coating comprises a thickness having a gradually changing concentration of the aluminum-containing species therethrough.

7. (Currently amended) A substrate processing chamber comprising:
- (a) a wall around a process zone;
 - (b) a substrate support in the process zone;
 - (c) a ring about the substrate;
 - (d) a gas distributor;
 - (e) a gas energizer; and
 - (f) a gas exhaust port,

wherein at least one of the wall, substrate support, ring, or gas distributor, comprises a component capable of being exposed to a plasma in a process chamber, the component comprising a structure ~~comprising a~~ composed of metal, and having an electroplated coating comprising an interface having a thickness with a gradually changing concentration of yttrium-containing species therethrough, and

whereby a substrate transported into the process chamber can be processed by a gas released by the gas distributor, energized by the gas energizer, and exhausted by from the gas exhaust port.

8. (Previously presented) A chamber according to claim 7 wherein the yttrium-containing species comprises one or more of elemental yttrium and yttrium oxide.

9. (Previously presented) A chamber according to claim 7 wherein the yttrium-containing species comprises yttrium oxide, and wherein the electroplated coating further comprises aluminum oxide or zirconium oxide.

10. (Previously presented) A chamber according to claim 7 wherein the electroplated coating comprises a compound comprising yttrium oxide and aluminum oxide.

11. (Previously presented) A chamber according to claim 7 wherein the electroplated coating comprises partially stabilized zirconium oxide.

12. (previously presented) A chamber according to claim 7 wherein the electroplated coating comprises a thickness having a gradually changing concentration of the aluminum-containing species therethrough.

13 – 24. (Cancelled).

25. (Previously presented) A component according to claim 1 wherein the electroplated coating is fabricated by annealing a first electroplated layer comprising aluminum or zirconium, and a second electroplated layer comprising yttrium.

26. (Previously presented) A component according to claim 25 comprising annealing the layers to form oxidized species.

27. (Previously presented) A component according to claim 1 wherein the electroplated coating is fabricated by electroplating a layer comprising a mixture of (i) yttrium and (ii) aluminum or zirconium onto the surface, and annealing the layer.

28. (Previously presented) A substrate processing chamber component capable of being exposed to a plasma in a process chamber, the component comprising:

- (a) a substrate processing chamber component structure; and
- (b) an electroplated coating on the substrate processing chamber component structure, the electroplated coating comprising yttrium-containing species and partially stabilized zirconium oxide, and the electroplated coating comprising a thickness having a gradually changing concentration of yttrium-containing species therethrough.

29. (Previously presented) A component according to claim 28 wherein the yttrium-containing species comprises one or more of elemental yttrium and yttrium oxide.

30. (Previously presented) A component according to claim 28 wherein the yttrium-containing species comprises yttrium oxide, and wherein the electroplated coating further comprises aluminum oxide.

31. (Previously presented) A component according to claim 28 wherein the electroplated coating comprises a compound comprising yttrium oxide and aluminum oxide.

32. (Previously presented) A chamber according to claim 28 wherein the electroplated coating comprises a thickness having a gradually changing concentration of the aluminum-containing species therethrough.

33. (Previously presented) A component according to claim 28 comprising a chamber wall, substrate support, ring, or gas distributor, of a process chamber.

34. (Previously presented) A component according to claim 1 wherein the electroplated coating is formed by:

- (i) immersing the surface of the component structure in an electroplating bath comprising a solution of yttrium species;
- (ii) connecting the component structure to a negative terminal of a voltage source; and
- (iii) connecting an anode immersed in the bath to a positive terminal of the voltage source, the anode comprising an inert material or material to be electroplated.

35. (Previously presented) A component according to claim 1 wherein the metal comprises an alloy.

36. (Previously presented) A chamber according to claim 7 wherein the electroplated coating is formed by:

- (i) immersing the surface of the component structure in an electroplating bath comprising a solution of yttrium species;
- (ii) connecting the component structure to a negative terminal of a voltage source; and
- (iii) connecting an anode immersed in the bath to a positive terminal of the voltage source, the anode comprising an inert material or the material to be electroplated.

37. (Previously presented) A chamber according to claim 7 wherein the metal comprises an aluminum alloy.

38. (Currently amended) A substrate processing chamber component capable of being exposed to a plasma in a process chamber, the component comprising:

- (a) a substrate processing chamber component structure; and
- (b) an electroplated coating on the substrate processing chamber component structure, the electroplated coating comprising (i) yttrium-containing species, (ii) aluminum-containing species comprising at least one of elemental aluminum or aluminum oxide, and (iii) zirconium-containing species comprising at least one of elemental zirconium or zirconium oxide.

39. (Previously presented) A component according to claim 38 wherein the component structure comprises a metal.

40. (Previously presented) A component according to claim 38 wherein the electroplated coating comprising a thickness having a gradually changing concentration of yttrium-containing species therethrough.

41. (Previously presented) A substrate processing chamber comprising:

- (a) a wall around a process zone;
- (b) a substrate support in the process zone;
- (c) a ring about the substrate;
- (d) a gas distributor;
- (e) a gas energizer; and
- (f) a gas exhaust port,

wherein at least one of the wall, substrate support, ring, or gas distributor, comprises a component capable of being exposed to a plasma in a process chamber, the component comprising a structure having an electroplated coating comprising yttrium-containing species and partially stabilized zirconium oxide.

42. (Previously presented) A chamber according to claim 41 wherein the component structure comprises a metal.

43. (Previously presented) A chamber according to claim 41 wherein the electroplated coating comprising a thickness having a gradually changing concentration of yttrium-containing species therethrough.